To: Alan Stine[astine@olytech.com]; Alec Hansen[mlct@mt.net]; Bill Mercer[wwmercer@hollandhart.com]; Habeck, Bob[BHabeck@mt.gov]; Brian Sugden[brian.sugden@plumcreek.com]; Chris Brick[chris@clarkfork.org]; Craig Woolard[cwoolard@bozeman.net]; Dave Aune[daune@greatwesteng.com]; Dave Galt[dave@montanapetroleum.org]; Doug Parker[DParker@hydrometrics.com]; Urban, Eric[EUrban@mt.gov]; Mathieus, George[gemathieus@mt.gov]; Gerald Mueller[gmueller@montana.com]; Glenn Oppel[goppel@montanarealtors.org]; Haley Beaudry[haleyb@bresnan.net]; Jay Bodner[jay@mtbeef.org]; Blend, Jeff[jblend@mt.gov]; Jeff Tiberi[jtiberi@macdnet.org]; jchambers@mt.gov[jchambers@mt.gov]; Jim Jensen[jjensen@meic.org]; North, John[jnorth@mt.gov]; John Wilson[jwilson@cityofwhitefish.org]; John Youngberg[johny@mfbf.org]; Julia Altemus[julia@montanaforests.com]; Mouch, Allison[AMouch@mt.gov]; Kyla Wiens[kwiens@meic.org]; Mark Lambrecht[marklambrecht@mt.net]; Mark Simonich[msimonich@helenahar.net]; Michael Perrodin[michael.perrodin@bnsf.com]; Mike Mullaney[mike.mullaney@holcim.com]; Suplee, Mike[msuplee@mt.gov]; Skubinna, Paul[PSkubinna@mt.gov]; Ryan Swinney[ryan@bruceswinney.com]; Scott Murphy[smurphy@m-m.net]; Shari Johnson[sajengineering@centurylink.net]; Laidlaw, Tina[Laidlaw.Tina@epa.gov]; tteegarden@mt.gov[tteegarden@mt.gov]; Tom Hopgood[thopgood@montanamining.org]; Reid, Tom[toreid@mt.gov]
Cc: Greeley, Carrie[CGreeley@mt.gov]
From: McCarthy, Mindy
Sent: Fri 12/20/2013 11:28:26 PM
Subject: Updated Nutrient Rule Package on NWG Website
Subchapters5_6_7_Notice.pdf

Hello-

The Department has posted on the Nutrient Work Group website the current version of the complete nutrient rule package. During rulemaking, the Board of Environmental Review (BER) will consider some of the documents, while the Department is responsible for others. Therefore, the documents have been organized on the website along those lines. BER rules include changes to subchapters 5, 6, and 7 of ARM 17.30, and Circular DEQ-12A. Department rule making would address New Rule I and Circular DEQ-12B. An updated guidance document for implementing the rules has also been posted.

Please note that due to technical issues, the Subchapters Notice has not yet been posted to the website but is included as an attachment. It will be posted to the website on 12/13/13.

The Board will consider initiation of rulemaking at its January 21, 2014 meeting in Helena, and a public hearing will be scheduled to occur during the public comment period to follow. Scheduling for the Department rule making is pending, but will occur during the same general timeframe as the BER's.

Happy Holidays!

Thanks-

Mindy McCarthy

Mindy McCarthy

Quality Manager

Water Quality Planning Bureau

Montana DEQ

MMccarthy3@mt.gov

406.444.6754

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW

OF THE STATE OF MONTANA

In the matter of the amendment of ARM 17.30.201, 17.30.507, 17.30.516, 17.30.602, 17.30.619, 17.30.622, 17.30.623, 17.30.624, 17.30.625, 17.30.626, 17.30.627, 17.30.628, 17.30.629, 17.30.635, 17.30.702, and 17.30.715 pertaining to permit application, degradation authorization, and annual permit fees, specific restrictions for surface water mixing zones, standard mixing zones for surface water, definitions, incorporations by reference, A-1 classification standards, B-1 classification standards, B-2 classification standards, B-3 classification standards, C-1 classification standards, C-2 classification standards, I classification standards, C-3 classification standards, general treatment standards, definitions, and criteria for determining nonsignificant changes in water quality	NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENT (WATER QUALITY)

TO: All Concerned Persons

1. On _____, 2014, at __ __.m., the Board of Environmental Review will hold a public hearing [in/at address], Montana, to consider the proposed amendment of the above-stated rules.

2. The board will make reasonable accommodations for persons with disabilities who wish to participate in this public hearing or need an alternative accessible format of this notice. If you require an accommodation, contact Elois Johnson, Paralegal, no later than 5:00 p.m., _____, 2014, to advise us of the nature of the accommodation that you need. Please contact Elois Johnson at Department of Environmental Quality, P.O. Box 200901, Helena, Montana 59620-0901; phone (406) 444-2630; fax (406) 444-4386; or e-mail ejohnson@mt.gov.

3. The board is proposing to adopt new Department Circular DEQ-12A (DEQ-12A), which contains base numeric nutrient standards for total nitrogen and total phosphorus, and to incorporate new DEQ-12A into the surface water quality classifications and the nondegradation rules. The board is also proposing rule amendments pertaining to definitions and a low flow for base numeric nutrient standards appropriate for the design of disposal systems.

The department has documented that various forms of nitrogen and phosphorus rank as the 4th, 8th, 10th, and 12th most common types of pollution in Montana's flowing waters. In fact, excess nitrogen and phosphorus levels account for 17 percent of all stream miles impaired by all forms of water pollution in Montana. The intent of the proposed nutrient standards is to control the undesirable effects of eutrophication. Eutrophication is the enrichment of a waterbody (e.g., a stream or lake) by nitrogen and phosphorus, which leads to increased plant and algae growth and decay and all the consequential changes to the water quality that occur as a result. At present Montana does not have numeric water quality standards for controlling eutrophication, except on the Clark Fork River. Therefore, in most cases, permit limits, including waste load allocations determined in Total Maximum Daily Loads (i.e. TMDLs), are based upon the narrative water quality standard. The narrative standard prohibits substances in water that "create conditions which produce undesirable aquatic life" (ARM 17.30.637(1)(e)). Translating the narrative standard into enforceable permit limits on a case-by-case basis is time-consuming, dependent upon judgment which invites controversy, and may result in inconsistent or differing permit limits due to various interpretations among permit or TMDL writers. Numeric nutrient criteria will resolve this.

The effects of excess nitrogen and phosphorus in streams and rivers go well beyond the undesirable aquatic life referred to in the narrative standard. Excess nitrogen and phosphorus affect other water quality parameters for which Montana already has standards (dissolved oxygen, pH). The state-of-the-science is such that linkages can clearly be made between nitrogen and phosphorus concentrations and these other, already-adopted standards. Thus, the numeric nutrient criteria will also assure protection and attainment of Montana's dissolved oxygen and pH standards which are, in and of themselves, critical to the protection of fish and aquatic life.

[Rationale for selection of criteria]

The nutrient criteria concentrations being proposed for adoption as standards are generally low, particularly in the western region of Montana. In many cases, the concentrations are below the limits of current wastewater treatment technology, particularly for nitrogen. Therefore, when little or no stream dilution is available, dischargers will find it difficult or impossible to meet the standards. Senate Bill 95 (2009 Legislature) and Senate Bill 367 (2011 Legislature), now codified at 75-5-313, MCA, addressed the high cost and technological difficulties associated with meeting the nutrient standards in the short term. Section 75-5-313, MCA, allows dischargers to be granted variances from numeric nutrient standards, once the criteria have been adopted as standards, in those cases where meeting the standards today would be an unreasonable economic burden or technologically infeasible. Variances from the standards may be granted for up to twenty years. Thus, 75-5-313, MCA, allows for the nutrient standards to be met in a staged manner, over time, as alternative effluent management methods are considered, nutrient removal technologies become more cost-effective and efficient, and nonpoint sources of nutrients are addressed. Rules implementing 75-5-313, MCA, are within the rulemaking authority of the Department of Environmental Quality, not the Board of Environmental Review. Concurrent with the board's rulemaking process initiated by this notice, the department has proposed rulemaking to implement the variance process. See MAR Notice 17-____. The department will hold a separate hearing on those rules.

Comments regarding the variance process must be submitted to the Department as indicated in MAR Notice No. 17-___.

4. The rules proposed to be amended provide as follows, stricken matter interlined, new matter underlined:

17.30.201 PERMIT APPLICATION, DEGRADATION AUTHORIZATION, AND ANNUAL PERMIT FEES (1) through (5) remain the same.

(6) The fee schedules for new or renewal applications for, or modifications of, a Montana pollutant discharge elimination system permit under ARM Title 17, chapter 30, subchapter 11 or 13, a Montana ground water pollution control system permit under ARM Title 17, chapter 30, subchapter 10, or any other authorization under 75-5-201, 75-5-301, or 75-5-401, MCA, or rules promulgated under these authorities, are set forth below as Schedules I.A, I.B, I.C, and I.D. Fees must be paid in full at the time of submission of the application. For new applications under Schedule I.A, the annual fee from Schedule III.A for the first year must also be paid at the time of application. For new applications under Schedule I.B and I.C, the annual fee is included in the new permit amount and covers the annual fee for the calendar year in which the permit coverage becomes effective.

(a) through (e) remain the same.

(f) Applications for new permits or permit renewals for sources that constitute a new or increased source, as defined in ARM 17.30.702~~(18)~~ (17), must pay a significance determination fee for each outfall in addition to the application fee.

(g) through (11)(b) remain the same.

AUTH: 75-5-516, MCA
IMP: 75-5-516, MCA

REASON: The amendment to ARM 17.30.201(6)(f) modifies a cross-reference to ARM 17.30.702 because the numbering in that rule is proposed to be changed in this notice.

17.30.507 SPECIFIC RESTRICTIONS FOR SURFACE WATER MIXING ZONES (1) Mixing zones for surface waters are ~~to comply with~~ subject to the following water quality standards:

(a) narrative water quality standards, standards for harmful substances, numeric acute and chronic standards for aquatic life~~,~~; standards in Department Circular DEQ-12A, or unless a nutrient standards variance has been issued for the receiving water; and standards based on human health must not be exceeded beyond the boundaries of the surface water mixing zone;

(b) through (3) remain the same.

AUTH: 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.516 STANDARD MIXING ZONES FOR SURFACE WATER (1) and (2) remain the same.

(3) Facilities that meet the terms and conditions in (a) through ~~(d)~~ (e) qualify for a standard mixing zone as follows:

(a) through (d) remain the same.

(e) Facilities that discharge the parameters found in Department Circular DEQ-12A to surface water. Discharge limitations must be based on dilution with the entire seasonal 14-day, five-year (seasonal 14Q5) low flow of the receiving water without the discharge.

(4) The length of a standard mixing zone for flowing surface water, other than a nearly instantaneous mixing zone, must not extend downstream more than the one-half mixing width distance or extend downstream more than ~~10~~ ten times the stream width, whichever is more restrictive. For purposes of making this determination, the stream width as well as the discharge limitations are considered at the 7Q10 or seasonal 14Q5 low flow. The seasonal 14Q5 low flow may be used only in conjunction with base numeric nutrient standards in Department Circular DEQ-12A. The recommended calculation to be used to determine the one-half mixing width distance downstream from a stream bank discharge is described below.

(a) $A_{1/2} = [0.4(W/2)^2V]/L$, where:

(i) remains the same.

(ii) W = width in feet at the 7Q10 or seasonal 14Q5;

(iii) V = velocity of the stream at the 7Q10 or seasonal 14Q5 downstream of the discharge (in ft/second);

(iv) L = lateral dispersion coefficient for the 7Q10 or seasonal 14Q5 downstream of the discharge (in ft^2/second), where:

(b) L = CDU, where:

(i) through (i)(E) remain the same.

(ii) D = average water depth at the 7Q10 or seasonal 14Q5 downstream of the discharge (in feet);

(iii) remains the same.

(c) $U = (32.2DS)^{1/2}$, where:

(i) remains the same.

(ii) D = average water depth at the 7Q10 or seasonal 14Q5 downstream of the discharge (in feet); and

(iii) through (6) remains the same.

AUTH: 75-5-301, MCA
IMP: 75-5-301, MCA

REASON: The manner in which nutrients affect and impact beneficial uses in streams and rivers is different from toxic and harmful compounds found in Department Circular DEQ-7 (DEQ-7), and it is necessary to develop an appropriate low flow design flow (the seasonal 14Q5) specifically for permitting nutrient discharges. Derivation of the seasonal 14Q5 is discussed in the proposed changes to ARM 17.30.635. Here, the rule amendments incorporate the seasonal 14Q5 flow into the calculations used to determine the length of a standard mixing zone. ARM 17.30.615 has been amended to provide that the full volume of a seasonal 14Q5, as opposed to some fraction of it, is to be used for dilution calculations for nutrients in

DEQ-12A. This allowance reflects the non-toxic nature of nutrients at the concentrations found in DEQ-12A.

17.30.602 DEFINITIONS In this subchapter the following terms have the meanings indicated below and are supplemental to the definitions given in 75-5-103, MCA:

(1) through (32) remain the same.

(33) "Total nitrogen" means the ~~total nitrogen concentration (as N) of unfiltered water. This may be determined by direct methods, or derived as the sum of the soluble (as N) and non-soluble (as N) nitrogen fractions. The filter used to separate the soluble and non-soluble fractions must be 0.45 µm~~ sum of all nitrate, nitrite, ammonia, and organic nitrogen, as N, in an unfiltered water sample. Total nitrogen in a sample may also be determined by the persulfate digestion or as the sum of total kjeldahl nitrogen plus nitrate plus nitrite.

(34) "Total phosphorus" means the ~~total phosphorus concentration (as P) of unfiltered water~~ sum of orthophosphates, polyphosphates, and organically bound phosphates, as P, in an unfiltered water sample. Total phosphorus may also be determined directly by persulfate digestion.

(35) through (38) remain the same.

(39) "DEQ-7" means the department circular that is adopted and incorporated by reference in ARM 17.30.619 and is entitled "Montana Numeric Water Quality Standards." This circular establishes water quality standards for toxic, carcinogenic, ~~bioconcentration~~ bioconcentrating, ~~nutrient,~~ radioactive, and harmful parameters, and also establishes human health-based water quality standards for the following specific nutrients with toxic effects:

(a) nitrate;

(b) nitrate + nitrite;

(c) and nitrite.

(40) "DEQ-12A" means the department circular that is adopted and incorporated by reference in ARM 17.30.619 and is entitled "Montana Base Numeric Nutrient Standards." This circular contains numeric water quality standards for total nitrogen and total phosphorus in surface waters.

(41) "DEQ-12B" means the department circular that is adopted and that is entitled "Montana Base Numeric Nutrient Standards Variances." This circular describes procedures for receiving a variance from the standards and will document recipients of individual variances.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

REASON: The proposed amendments to ARM 17.30.602 provide modification of existing definitions and a new definition in order to implement the nutrient standards. The modified definition of "total nitrogen," at (33), provides a more technically accurate description compared to the old definition. The same is true for "total phosphorus," at (34). In the definition for "DEQ-7," at (39), "nutrient" has been removed because base numeric nutrient standards will now be housed in a new department circular, DEQ-12A. Some nitrogen compounds (nitrate, nitrate +

nitrite, and nitrite) have toxic effects at relatively high concentrations and standards for them already exist and are intended to protect human health. By definition at 75-5-103(2)(b), MCA, these compounds are not considered part of the base numeric nutrients standards. Therefore, they will remain in DEQ-7 and are now listed under the DEQ-7 definition for better clarity. The new definition at (40), "DEQ-12A," defines the new department circular where base numeric nutrient standards are found. In addition to the criteria concentrations, the circular includes instructions on how to develop permits for base numeric nutrient standards, more information on how the department will go about granting nutrient standards variances, and a table to document recipients of individual variances. As there are likely to be modifications and additions to DEQ-12A going forward, the board has concluded that a circular would be the best means by which this complex information could be updated. In MAR Notice No. 17-___, the department is proposing to adopt new department Circular DEQ-12B. It contains the procedures for receiving a variance from the standards and will document recipients of individual variances. The board anticipates that DEQ-12B will be adopted before or at the same time DEQ-12A is adopted.

17.30.619 INCORPORATIONS BY REFERENCE (1) The board adopts and incorporates by reference the following state and federal requirements and procedures as part of Montana's surface water quality standards:

(a) Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (October 2012 edition), which establishes water quality standards for toxic, carcinogenic, bioconcentrating, ~~nutrient,~~ radioactive, and harmful parameters and also establishes human health-based water quality standards for the following specific nutrients with toxic effects:

(i) nitrate;

(ii) nitrate + nitrite; and

(iii) nitrite;

(b) remains the same.

(c) 40 CFR Part 136 (July 1, 2011), which establishes guidelines and procedures for the analysis of pollutants; ~~and~~

(d) 40 CFR 131.10(g), (h) and (j) (2000), which establishes criteria and guidelines for conducting a use attainability analysis~~.~~; and

(e) Department Circular DEQ-12A, entitled "Montana Base Numeric Nutrient Standards" (December 2013 edition), which establishes numeric water quality standards for total nitrogen and total phosphorus in surface waters.

(2) If a court of competent jurisdiction declares 75-5-313, MCA, or any portion of that statute invalid, or if the United States Environmental Protection Agency disapproves 75-5-313, MCA, or any portion of that statute, under 30 CFR 131.21, then (1)(e) and all references to DEQ-12A, base numeric nutrient standards and nutrient standards variances in ARM 17.30.201, 17.30.507, 17.30.516, 17.30.602, 17.30.622 through 17.30.629, 17.30.635, 17.30.702, and 17.30.715 are void, and the narrative water quality standards contained in ARM 17.30.637 are the standards for total nitrogen and total phosphorus in surface water, except for the Clark Fork River, for which the standards are the numeric standards in ARM 17.30.631.

(2) remains the same, but is renumbered (4).

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

REASON: The amendments to the definitions for DEQ-7, in (1)(a), correspond to those already discussed above for definitions (ARM 17.30.602). Proposed new (2) is a non-severability clause. Essentially, if the statute that defines the nutrient standards variance process is rendered invalid, then the base numeric nutrient standards would no longer be contained in the rules. The Legislature intended that variances be available to permittees once base numeric nutrient standards were adopted and both pieces (base numeric standards and variances) must remain together as a package.

17.30.622 A-1 CLASSIFICATION STANDARDS (1) and (2) remain the same.

(3) No person may violate the following specific water quality standards for waters classified A-1:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient or harmful parameters may not exceed the applicable standards or limits set forth in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits contained in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.623 B-1 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified B-1:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits set forth in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ- and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or

exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.624 B-2 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified B-2:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits set forth in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.625 B-3 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified B-3:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits set forth in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.626 C-1 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified C-1:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

17.30.627 C-2 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified C-2:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits specified in ~~d~~Department Circular ~~WQB~~ DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

REASON: The proposed amendments to ARM 17.30.622 through 17.30.627 are necessary to incorporate DEQ-12A standards and nutrient standards variance limits into the surface water classes.

17.30.628 I CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified I:

(a) through (i) remain the same.

(j) Beneficial uses are considered supported when the concentrations of toxic, carcinogenic, or harmful parameters in these waters do not exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows

equal or exceed the flows specified in ARM 17.30.635~~(4)~~ (2) or, alternatively, for aquatic life when site-specific criteria are adopted using the procedures given in 75-5-310, MCA. The limits shall be used as water quality standards for the affected waters and as the basis for permit limits instead of the applicable standards in ~~d~~Department Circular DEQ-7.

(k) Limits for toxic, carcinogenic, or harmful parameters in new discharge permits issued pursuant to the MPDES rules (ARM Title 17, chapter 30, subchapter 13) are the larger of ~~either~~ the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance, site-specific standards, or one-half of the mean in-stream concentrations immediately upstream of the discharge point.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

REASON: The proposed amendment to ARM 17.30.628 is necessary to incorporate DEQ-12A and the nutrient standards variance limits into the I surface water class. I Class waterbodies are those which had severe human-caused pollution problems at the time the surface water class system was adopted in the 1970s, and it is the board's intent that these waterbodies will eventually support beneficial uses typical for ecologically-similar unimpacted waterbodies.

17.30.629 C-3 CLASSIFICATION STANDARDS (1) remains the same.

(2) No person may violate the following specific water quality standards for waters classified C-3:

(a) through (g) remain the same.

(h) Concentrations of carcinogenic, bioconcentrating, toxic, radioactive, nutrient, or harmful parameters may not exceed the applicable standards or limits set forth in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance.

(i) Dischargers issued permits under ARM Title 17, chapter 30, subchapter 13, shall conform with ARM Title 17, chapter 30, subchapter 7, the nondegradation rules, and may not cause receiving water concentrations to exceed the applicable standards or limits specified in ~~d~~Department Circular DEQ-7 and in the base numeric nutrient standards or a nutrient standards variance when stream flows equal or exceed the design flows specified in ARM 17.30.635~~(4)~~ (2).

(j) and (k) remain the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, 75-5-313, MCA

REASON: The proposed amendments to ARM 17.30.629 are necessary to incorporate DEQ-12A standards and nutrient variance limits into the C-3 surface water class.

17.30.635 GENERAL TREATMENT STANDARDS (1) through (1)(e) remain the same.

(2) For design of disposal systems, stream flow dilution requirements must be based on the minimum consecutive seven-day average flow which may be expected to occur on the average of once in ten years. When dilution flows are less than the above design flow at a point discharge, the discharge is to be governed by the permit conditions developed for the discharge through the waste discharge permit program. If the flow records on an affected surface water are insufficient to calculate a ten-year seven-day low flow, the department shall determine an acceptable stream flow for disposal system design. ~~The department shall determine the acceptable stream flow for disposal system design for controlling nitrogen and phosphorus concentrations.~~ For total nitrogen and total phosphorus, the stream flow dilution requirements must be based on the seasonal 14Q5, which is the lowest average 14 consecutive day low flow, occurring from July through October, with an average recurrence frequency of once in five years.

(3) remains the same.

AUTH: 75-5-201, 75-5-301, MCA
IMP: 75-5-301, MCA

REASON: The proposed amendments to ARM 17.30.635 will provide a low flow for the design of disposal systems specific to eutrophication-based nutrient standards. Work by the department and others shows that nuisance benthic algae can develop in about 15-20 days once nutrient concentrations exceed the proposed standards. In many streams, these algae levels can ultimately lead to dissolved oxygen impacts. The use of the seasonal 14Q5 flow for the design of disposal systems is appropriate because this flow should not allow excess algae levels to develop more often than about once in five summers, on average. This frequency of exceedence is within the acceptable recommendations of the U.S. Environmental Protection Agency for the protection of aquatic life. Unlike the 7Q10 flow, which will continue to be used for parameters in DEQ-7 and which was derived from year-round flow data, the seasonal 14Q5 flow is derived from July through October data and is, therefore, in alignment with the proposed nutrient standards' periods of application. The seasonal 14Q5 is routinely calculated and reported by the U.S. Geological Survey.

17.30.702 DEFINITIONS The following definitions, in addition to those in 75-5-103, MCA, apply throughout this subchapter (Note: 75-5-103, MCA, includes definitions for "base numeric nutrient standards," "degradation," "existing uses," "high quality waters," "mixing zone," and "parameter"):

(1) through (16) remain the same.

~~(17) "Nutrients" means total inorganic phosphorus and total inorganic nitrogen.~~

(18) through (21) remain the same, but are renumbered (17) through (20).

~~(22)~~ (21) "Reporting values (RRV)" means the detection level that must be achieved in reporting surface water or ground water monitoring or compliance data to the department unless otherwise specified in a permit, approval, or authorization issued by the department. The RRV is the department's best determination of a level of analysis that can be achieved by the majority of commercial, university, or

governmental laboratories using EPA approved methods or methods approved by the department. The RRV is listed in Department Circular DEQ-7, Department Circular DEQ-12A, and in the definition of "total inorganic phosphorus."

(23) remains the same, but is renumbered (22).

(23) "Total inorganic phosphorus" means the sum of all orthophosphates, as P, in an unfiltered water sample. Total inorganic phosphorus may also be determined by direct colorimetry. The RRV for total inorganic phosphorus is three µg/L.

(24) "Total nitrogen" means the sum of all nitrate, nitrite, ammonia, and organic nitrogen, as N, in an unfiltered water sample. Total nitrogen in a sample may also be determined by persulfate digestion, or as the sum of total kjeldahl nitrogen plus nitrate plus nitrite.

(25) "Total phosphorus" means the sum of orthophosphates, polyphosphates, and organically bound phosphates, as P, in an unfiltered water sample. Total phosphorus may also be determined directly by persulfate digestion.

(24) and (25) remain as proposed, but are renumbered (26) and (27).

~~(26)~~ (28) The board adopts and incorporates by reference:

(a) Department Circular DEQ-7, entitled "Montana Numeric Water Quality Standards" (October 2012 edition), which establishes water quality standards for toxic, carcinogenic, bioconcentrating, ~~nutrient,~~ radioactive, and harmful parameters and also establishes human health-based water quality standards for the following specific nutrients with toxic effects:

(i) nitrate;

(ii) nitrate + nitrite; and

(iii) nitrite;

(b) Department Circular DEQ-12A, entitled "Montana Base Numeric Nutrient Standards" (December 2013 edition), which establishes numeric water quality standards for total nitrogen and total phosphorus in surface waters;

(b) through (d) remain the same, but are renumbered (c) through (e).

AUTH: 75-5-301, 75-5-303, MCA
IMP: 75-5-303, MCA

REASON: The proposed amendments to ARM 17.30.702 will modify current definitions in the nondegration rules and will add new definitions necessary for the implementation of numeric nutrient standards. "Base numeric nutrients standards" have been added to the list of definitions from 75-5-103, MCA, that are incorporated by reference. The current definition of "nutrients," at (17), is being repealed, because it is not consistent with the use of the term in DEQ-12A, which contains standards for total nutrients. The two soluble compounds (total inorganic phosphorus and total inorganic nitrogen), currently listed under (17), are found in DEQ-7 and are linked to the eutrophication narrative standard in ARM 17.30.637(1)(e) via footnote 8. These compounds are being superseded by the total nutrients in DEQ-12A. Further, the definition of "nutrients" added no clear value to the nondegradation rules, because, where needed, specific nutrient compounds or forms (e.g., TKN, nitrate as N) are named or referenced in the nondegradation rules. The definition of "total inorganic phosphorus," at (23), is proposed because its

equivalent form, "phosphorus, inorganic," and associated RRV, in DEQ-7, are superseded by this rulemaking. This compound is only referred to in the nondegradation rules at ARM 17.30.715(2)(e) and there is no concentration limit associated with it. Therefore, only a required reporting value (RRV) is provided here. The RRV has been modified from 1 µg/L to 3 µg/L to reflect routinely-achievable levels and is consistent with RRV derivation methods currently used for compounds in DEQ-7 and DEQ-12A. The proposed definitions of "total nitrogen," at (24), and "total phosphorus," at (25), correspond to those discussed above for amendments to ARM 17.30.602. The definition of "DEQ-7," in (28)(b), has been amended for the same reasons described above for ARM 17.30.602.

17.30.715 CRITERIA FOR DETERMINING NONSIGNIFICANT CHANGES IN WATER QUALITY (1) The following criteria will be used to determine whether certain activities or classes of activities will result in nonsignificant changes in existing water quality due to their low potential to affect human health or the environment. These criteria consider the quantity and strength of the pollutant, the length of time the changes will occur, and the character of the pollutant. Except as provided in (2), changes in existing surface or ground water quality resulting from the activities that meet all the criteria listed below are nonsignificant, and are not required to undergo review under 75-5-303, MCA:

(a) and (b) remain the same.

(c) discharges containing toxic parameters ~~or nutrients~~, except as specified in (1)(d) and (e), which will not cause changes that equal or exceed the trigger values in ~~d~~Department Circular DEQ-7. Whenever the change exceeds the trigger value, the change is not significant if the resulting concentration outside of a mixing zone designated by the department does not exceed 15% of the lowest applicable standard;

(d) through (e) remain the same.

(f) changes in the quality of water for any harmful parameter, including parameters listed in Department Circular DEQ-12A, for which water quality standards have been adopted other than ~~nitrogen, phosphorous, and~~ carcinogenic, bioconcentrating, or toxic parameters, in either surface or ground water, if the changes outside of a mixing zone designated by the department are less than 10% of the applicable standard and the existing water quality level is less than 40% of the standard;

(g) through (3) remain the same.

(4) If a court of competent jurisdiction declares 75-5-313, MCA, or any portion of that statute invalid or if the United States Environmental Protection Agency disapproves 75-5-313, MCA, or any portion of that statute under 30 CFR 131.21, then the significance criteria contained in (1)(g) are the significance criteria for total nitrogen and total phosphorus in surface water.

AUTH: 75-5-301, 75-5-303, MCA
IMP: 75-5-303, MCA

REASON: The proposed amendments to ARM 17.30.715 will allow the department to calculate nonsignificant changes in water quality for the base numeric

nutrient standards in DEQ-12A. If adopted by the board, base numeric nutrient standards will preclude the need to use the narrative standards at ARM 17.30.637(1)(e) to interpret eutrophication-based water quality impacts from nutrients. Base numeric nutrient standards are intended to control eutrophication (see definition of eutrophication in Overview), and, at the concentrations found in DEQ-12A, the board considers base numeric nutrient standards to be harmful parameters. Therefore, DEQ-12A is incorporated into (1)(f), the section of the nondegradation rules addressing nonsignificance specific to harmful parameters. Nitrogen compounds at concentrations that are toxic, e.g. nitrate at ten mg/L, will remain in DEQ-7, as discussed earlier, and toxics-based nonsignificance criteria applicable to such compounds will continue to be applied to them. The proposed deletion of "or nutrients," in (1)(c), corresponds with the retaining of toxic-level nitrogen compounds in DEQ-7 and the relocation of eutrophication-based nitrogen and phosphorus standards to DEQ-12A. Proposed new (4) is a non-severability clause. If the statute that defines the nutrient standards variance process is rendered invalid, then the numeric nutrient standards in DEQ-12A are void and the narrative standard for nutrients at ARM 17.30.637(1)(e) applies. As a result, the part of the nondegradation rules at ARM 17.30.715(1)(g) that relate to the narrative standards would apply. The Legislature intended that both major pieces of the numeric nutrient standards rules (base numeric nutrient standards and nutrient standards variances) remain together as a package.

5. Concerned persons may submit their data, views, or arguments, either orally or in writing, at the hearing. Written data, views, or arguments may also be submitted to Elois Johnson, Paralegal, Department of Environmental Quality, 1520 E. Sixth Avenue, P.O. Box 200901, Helena, Montana 59620-0901; faxed to (406) 444-4386; or e-mailed to ejohnson@mt.gov, no later than 5:00 p.m., _____, 2014. To be guaranteed consideration, mailed comments must be postmarked on or before that date.

6. Katherine Orr, attorney for the board, or another attorney for the Agency Legal Services Bureau, has been designated to preside over and conduct the hearing.

7. The board and department maintain a list of interested persons who wish to receive notices of rulemaking actions proposed by this agency. Persons who wish to have their name added to the list shall make a written request that includes the name, e-mail, and mailing address of the person to receive notices and specifies that the person wishes to receive notices regarding: air quality; hazardous waste/waste oil; asbestos control; water/wastewater treatment plant operator certification; solid waste; junk vehicles; infectious waste; public water supply; public sewage systems regulation; hard rock (metal) mine reclamation; major facility siting; opencut mine reclamation; strip mine reclamation; subdivisions; renewable energy grants/loans; wastewater treatment or safe drinking water revolving grants and loans; water quality; CECRA; underground/above ground storage tanks; MEPA; or general procedural rules other than MEPA. Notices will be sent by e-mail unless a mailing preference is noted in the request. Such written request may be mailed or

delivered to Elois Johnson, Paralegal, Department of Environmental Quality, 1520 E. Sixth Ave., P.O. Box 200901, Helena, Montana 59620-0901, faxed to the office at (406) 444-4386, e-mailed to Elois Johnson at ejohnson@mt.gov, or may be made by completing a request form at any rules hearing held by the board.

8. The bill sponsor contact requirements of 2-4-302, MCA, do not apply.

9. With regard to the requirements of Chapter 318, Section 1, Laws of 2013, the department has determined that the adoption of the above-referenced rules will significantly and directly impact small businesses.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

_____ BY: _____

JOHN F. NORTH
Rule Reviewer

ROBIN SHROPSHIRE
Chairman

Certified to the Secretary of State, _____, 2014.